

REMARKS

Please reconsider the application in view of the following remarks. Applicant thanks the Examiner for carefully reconsidering this application.

Preliminary Matters

Pursuant to a substitute Power of Attorney filed herewith, please amend the attorney docket number to 17665/007001 and forward all future communications to the address associated with customer No. 22511.

Disposition of the Claims

Claims 1-5 and 8-21 were pending. Claims 5, 9, and 14 have been canceled, and new claims 22-24 are added. Therefore, claims 1-4, 8, 10-13, and 15-24 are pending after the amendments. Claims 1, 3, 21, and 22 are independent. The remaining claims depend, directly or indirectly, from independent claims.

Amendment to the Claims

Claims 1-4, 8, 10, 12-13, and 15-21 have been amended to clarify the inventions recited. Support for the amendments can be found, for example, in paragraph [0052] of the published application No. 2005/0228234. No new matter is introduced by these amendments.

Rejections under 35 U.S.C. § 103

(A) Claim 1, 2, 12-18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shusterman US Patent Publication Number 2003/0023146 in view of Kloecker US Patent Number 6,315, 745 and Heilman et al. US Patent Publication Number 2003/0158593. Claim 14

has been canceled, rendering this rejection moot with respect to this claim. Claims 1, 2, 12-13, 15-18, and 21 have been amended. To the extent that this rejection may still apply to the amended claim, this rejection is respectfully traversed.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be shown or suggested by the prior art. In *re Royka*, 490 F. 2d 981, 180 USPQ (C.C.P.A., 1074)

The present invention relates to methods and apparatus for monitoring physiological functions or conditions of a user, using a special garment that includes one or more sensors and a monitoring center unit. The monitoring center unit includes a communication port for transmitting and receiving signals. Importantly, by having sensors and a monitoring center unit integrated in a garment, a system of the invention is capable of self-sustained monitoring without having to be in constant communication with an external control/monitoring center. Accordingly, embodiments of the invention make it possible to continue to monitor user's conditions even when communication with external facility (e.g., monitoring center) is cut off.

In addition, the garment may optionally include one or more medical treatment devices for providing treatments to the user. Therefore, a garment of the invention is capable of self-sustained monitoring and can provide treatments to the user based on the monitored data.

A method, as recited in independent claim 1, includes, *inter alia*, “using one or more sensors on a garment worn by the user or one or more biochips implanted in the user to monitor the physiological functions or conditions of the user; using one or more medical treatment devices mounted in predetermined zones of the garment for applying medical

treatments to the user; and using a monitoring center unit mounted on the garment to transmit monitored data to a proximate or remote control center through a communication port on the monitoring center unit.” Independent claim 21 includes similar limitations.

In contrast, Shusterman discloses an integrated remote patient monitoring system that includes a garment, a monitoring device and a medication dispensing unit. Importantly, the monitoring device and the medication dispensing unit are separate from the garment. The garment includes sensors and a connector for communication with the external monitoring device and the medication dispensing unit. Therefore, a garment of Shusterman is incapable of monitoring and treatments without being linked to external units. Specifically, Shusterman teaches:

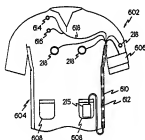


FIG. 6

“FIG. 6 is a diagram of an exemplary garment 216 in accordance with the present invention. Garment 216 is adapted to house at least one sensor 218, and sensor 218 is coupled to the connector 215. Connector 215 provides a medium through which the sensor 218 communicates with patient monitoring unit 214. Garment 216 includes a sleeve portion 602 adapted to fit the patient's upper arm, and a torso portion 604 adapted to fit the patient's upper body. Sleeve portion 602 includes a pouch 606 adapted to receive a blood pressure cuff (not shown) to monitor the patient's blood pressure.” (¶ [0084]).

Shusterman does not disclose using medical treatment devices mounted in predetermined zones of the garment body for applying medical treatments to the user. In addition, Shusterman does not disclose a monitoring center mounted on the garment.

Specifically, Shusterman teaches, “Typically, patient monitoring unit 214 is located at the patient's bedside.” (¶ [0091]) (emphasis added). Therefore, Shusterman fails to teach “using a monitoring center unit mounted on the garment to transmit monitored data to a

proximate or remote control center through a communication port on the monitoring center unit,” as required by claim 1. Shusterman also fails to teach or suggest similar limitations in claim 21, e.g., “a monitoring center unit mounted on the garment.”

Kloecker does not teach or suggest that which is missing in Shusterman, as evidenced by the fact that the Examiner relies on Kloecker for disclosing a garment comprising air bags for treating lymphedema and other related illness. (Office Action, p. 3, ll. 15-16).

Heilman also fails to teach that which is missing in Shusterman and Kloecker, as evidenced by the fact that the Examiner relies on Heilman for teaching a cardiac garment with a wearable defibrillator. (Office Action, p. 4, ll. 4-5).

Therefore, Shusterman, Kloecker and Heilman, whether considered separately or in combination, fail to teach or suggest at least one limitation of claim 1 or 21, i.e., “a monitoring center unit mounted on the garment.”

Thus, Shusterman, Kloecker and Heilman cannot render claim 1 and 12 obvious, and dependable claim 2 and 12-13, 15-18 should also be patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

(B) Claims 3-5 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shusterman in view of Heilman et al. US Patent Publication Number 2003/0158593. Claims 5 and 9 have been canceled, rendering this rejection moot with respect to these claims. Claim 3

has been amended. To the extent that this rejection may still apply to amended claims, this rejection is respectfully traversed.

Claim 3 is directed to an apparatus for monitoring physiological functions or conditions of a user. An apparatus, as recited in claim 3, requires, *inter alia*, “the one or more medical treatment devices are selected from the group consisting of an oxygen source device, a pump, an air bag, a body temperature regulator, a pain-causing device, a hypodermic syringe, an electroshock device and a combination thereof, wherein the air bag is of the type that corrects the posture of the user, that fixes a broken bone in position, that stops bleeding, that applies a sudden pressure to stimulate the user to determine whether the user is conscious, or that applies cardio-pulmonary resuscitation or abdominal thrust (Heimlich maneuver) to the user; a monitoring center unit on the garment electrically connected with the sensors and the medical treatment devices, wherein the monitoring center unit comprises a communication port for receiving and transmitting signals.”

Neither Shusterman nor Heilman teaches or suggests a garment having integrated sensors, treatment devices, and a monitoring center unit. Therefore, a combination of Shusterman and Heilman fails to teach or suggest all limitations of claim 3. Thus, claim 3 is patentable over Shusterman in view of Heilman, and dependent claims 4, 8, and 10-11 should also be patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

(C) Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shusterman, Kloecker and Heilman as applied to claim 1 above and further in view of Starkweather et al. US Patent Publication Number 2001/0041920. This rejection is respectfully traversed.

Claim 19 depends from claim 1. As noted above, Shusterman and Heilman fail to teach or suggest at least one limitation of claim 1, i.e., “using one or more medical treatment devices mounted in predetermined zones of the garment for applying medical treatments to the user; and using a monitoring center unit mounted on the garment to transmit monitored data to a proximate or remote control center through a communication port on the monitoring center unit.”

Starkweather fails to teach or suggest that which is missing in Shusterman and Heilman, as evidenced by the fact that the Examiner relies on Starkweather for teaching an implanted glucose sensor.

Therefore, claim 1 is patentable over Shusterman in view of Heilman further in view of Starkweather. Claim 19 should also be patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

(D) Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shusterman in view of Heilman et al. US Patent Publication Number 2003/0158593 as applied to claim 3 and further in view of Kloecker US Patent Publication Number 6,315,745. This rejection is respectfully traversed.

Claim 20 depends from claim 3. As noted above, Shusterman in view of Heilman fail to teach at least one limitation of claim 3, i.e., "a monitoring center unit on the garment electrically connected with the one or more sensors and the one or more medical treatment devices, wherein the monitoring center unit comprises a communication port for receiving and transmitting signals."

Kloecker does not teach or suggest that which is missing in Shusterman and Heilman, as evidenced by the fact that the Examiner relies on Kloecker for disclosing inflatable air bags.

Therefore, Shusterman in view of Heilman further in view of Kloecker fail to teach or suggest every limitation of claim 3. Thus, claim 3 is patentable over Shusterman in view of Heilman further in view of Kloecker, and dependent claim 20 should also be patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

New Claims

New claim 22 also include a limitation, "a monitoring center unit mounted on the garment and connected with the one or more sensors, wherein the monitoring center unit comprises a communication for transmitting and receiving signals to and from a control center," not taught in any of the references. Therefore, new claims 22-24 should also be patentable.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise,

the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 17665/007001).

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Respectfully submitted,

By 

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